MULTIMEDIA **UNIVERSITY**

MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 1, 2017 / 2018 SESSION

PPE0044 – BASIC MICROECONOMICS
(Foundation in Business)

11 OCTOBER 2017
2.30p.m. - 4.30p.m.
(2 Hours)

INSTRUCTIONS TO STUDENT

1. This question paper consists of **TEN (10)** pages.

2. Answer **ALL** the questions in **Sections A and B**.

3. Shade your answers for **Section A** on the OMR sheet. Write your answers for **Section B** in the Answer Booklet.

SECTION A : MULTIPLE-CHOICE QUESTIONS [30 MARKS]

Instructions: Answer **ALL** questions in this section. Shade your answers on the **OMR** sheet.

1. Refer to *Exhibit 1*. The demand for milkshake is unit elastic at Point C. If a store reduces the price of a bottle of milkshake from P_3 to P_4, its total revenue will _____ .
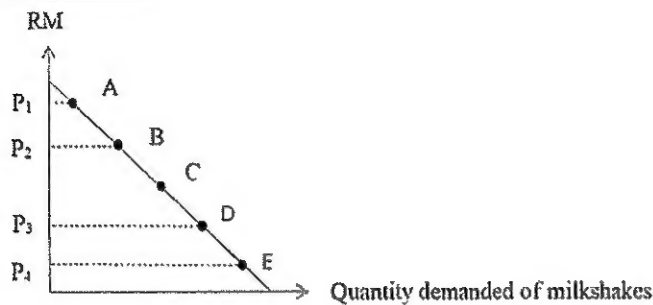
RM

Exhibit 1

A. increase
B. decrease
C. remain constant
D. either increase or decrease
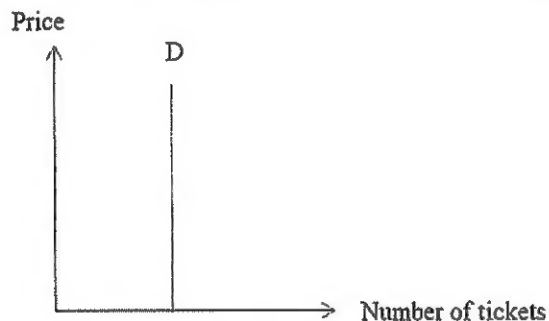
2. Refer to *Exhibit 2*. The demand for tickets is _____ .

Price

Exhibit 2

A. unit price elastic
B. perfectly price elastic
C. perfectly price inelastic
D. perfectly income inelastic

Continued...

Exhibit 3 shows Sarah's budget line. Sarah earns $500 per week selling chocolates. With this money she buys sushi and rose bushes. Each piece of sushi costs $1.00 and each rose bush costs $10.00. Refer to *Exhibit 3* for questions no. 3 and no. 4.
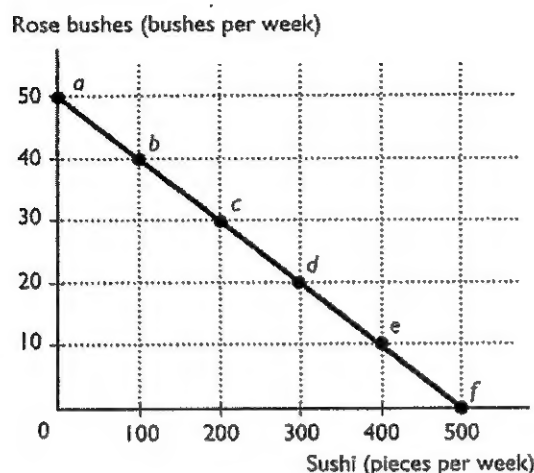

Exhibit 3

3. Sarah will be at which point on her budget line if she spends $200 per week on sushi?
   A. Point a
   B. Point b
   C. Point c
   D. Point d

4. Sarah is **NOT** able to purchase the combination of _____ .
   A. 50 rose bushes and 0 piece of sushi
   B. 0 rose bushes and 300 pieces of sushi
   C. 20 rose bushes and 200 pieces of sushi
   D. 30 rose bushes and 300 pieces of sushi

Refer to *Exhibit 4* for question no. 5
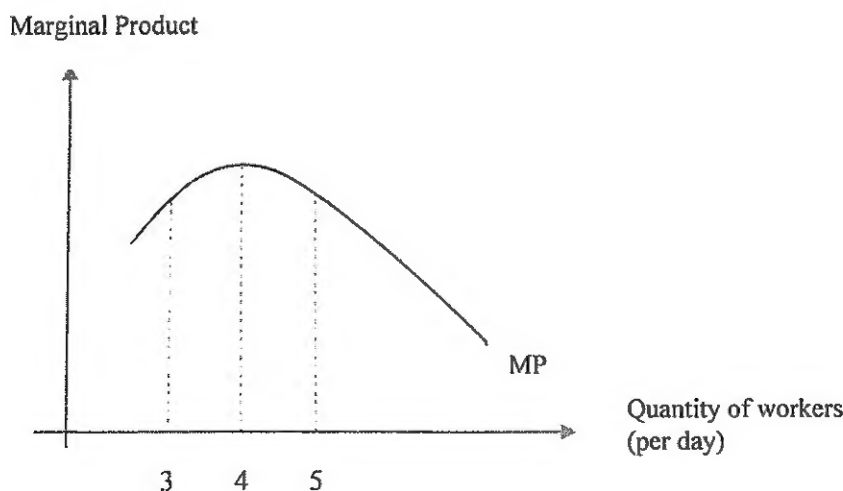

Exhibit 4

Continued...

5. As shown in **Exhibit 4**, the law of diminishing returns applies where there are

   _____.
   A. more than 5 workers per day
   B. more than 4 workers per day
   C. more than 3 workers per day
   D. between 0 and 5 workers per day

6. If both the marginal cost and the average variable cost curves are U-shaped, at the point of minimum average variable cost, the marginal cost must be _____.
   A. at its minimum
   B. equal to the average variable cost
   C. less than the average variable cost
   D. greater than the average variable cost

7. The owner of a local pizza stall has estimated that if he lowers the price of pizza from RM2.00 to RM1.50, he will increase sales from 400 to 500 pizzas per day. Using the midpoint formula, the demand for pizzas is _____.
   A. elastic
   B. inelastic
   C. unit elastic
   D. perfectly elastic

8. Richard's income has just risen from RM940 per week to RM1, 060 per week. As a result, he decides to purchase 9 percent more steak per week. The income elasticity of Richard's demand for steak is _____.
   A. 0.75
   B. 1.33
   C. 0.90
   D. 1.00

9. If Jenny gets 40 utils from her first piece of toast for breakfast and a total of 70 utils from two pieces of toast, then the marginal utility of the first piece is _____ utils and the marginal utility of the second piece is _____ utils.
   A. 40; 70
   B. 40; 30
   C. 70; 40
   D. 40; 110

10. Billy has a $20 budget to spend on yogurt and cereal. Yogurt cost $2 each and cereal costs $4 each. Suppose that the quantity of yogurt is on the vertical axis and the quantity of cereal is on the horizontal axis. The budget line's vertical intercept equals

    _____.
    A. 40 cereals
    B. 10 yogurts
    C. 20 yogurts
    D. 40 yogurts

Continued...

11. A lecturer left her RM100,000-a-year teaching position to work full-time in her own consulting business. In the first year, she had total revenue of RM200,000 and business expenses of RM100,000. She made a(an) _____ .
    A. economic loss
    B. economic profit
    C. zero economic profit
    D. accounting loss but not an economic loss

Refer to *Exhibit 5* for question no. 12.

Total output (cases of books)	Total variable costs (RM)	Total costs (RM)
0	0	200
1	100	300
2	150	350
3	250	450
4	450	650

Exhibit 5

12. In *Exhibit 5*, the marginal cost of increasing production from 2 to 3 cases of books is _____ .

    A. RM100
    B. RM150
    C. RM450
    D. RM800

13. The ABC Computer Company wants to increase the quantity of computers it sells by 5%. If the price elasticity of demand is 2.5, the company must _____ .
    A. increase price by 0.50%
    B. increase price by 2.00%
    C. decrease price by 0.50%
    D. decrease price by 2.00%

14. At a price of RM20, a store can sell 24 picture frames a day. At a price of RM18, the store can sell 33 picture frames a day. Since total revenue _____ when the price decrease, demand must be _____ .
    A. increase; elastic
    B. decrease; elastic
    C. increase; inelastic
    D. increase; unit elastic

Continued...

15. In a week, Samantha consumes some quantities of lobster dinners so that her marginal utility from a lobster dinner is 500 utils. The price of a lobster dinner is $25. She also consumes some quantities of spaghetti dinners so that her marginal utility is 300 utils, while its price is $15. Samantha is allocating her entire budget. What should she do to maximise her total utility?
    A. consume more lobster dinners and fewer spaghetti dinners
    B. consume more spaghetti dinners and fewer lobster dinners
    C. consume fewer lobster dinners and fewer spaghetti dinners
    D. consume the current combination of lobster and spaghetti dinners

16. Moving along an indifference curve, if a consumer requires a small amount of the good measured along the y-axis to make up for one unit less of the good measured on the x-axis, then _____.
    A. total utility is increasing
    B. the marginal rate of substitution is low and the indifference curve is flat
    C. the marginal rate of substitution is low and the indifference curve is steep
    D. the marginal rate of substitution is high and the indifference curve is steep

17. Average total cost is very high when a small amount of output is produced because _____.
    A. average fixed cost is large
    B. of diminishing marginal product
    C. variable costs are spread over only a few units of output
    D. all of the above

18. Which of the following is **FALSE**?
    A. Average fixed cost continuously declines as output increases
    B. Marginal cost is equal to the change in total cost divided by change in quantity of output
    C. The vertical distance between the AVC curve and the ATC curve gets narrower as more output is produced
    D. The law of diminishing marginal returns states that, in the long run, as ever larger amount of a variable input are combined with fixed inputs, eventually the marginal product of the variable input will decline

19. How does the firm-specific demand curve in a perfectly competitive market compared to that in a monopoly?
    A. They are the same
    B. The firm-specific demand curve in a perfectly competitive market is vertical. The demand curve in a monopoly is horizontal.
    C. The firm-specific demand curve in a perfectly competitive market is horizontal. The demand curve in a monopoly is upward sloping.
    D. The firm-specific demand curve in a perfectly competitive market is horizontal. The demand curve in a monopoly is downward sloping.

20. Marginal revenue is equal to price for a perfectly competitive firm because
    _____.
    A. firms need to lower price to increase the quantity sold
    B. firms can increase price and still increase the quantity sold
    C. total revenue increases by the price of the good when an additional unit is sold
    D. total revenue increases by less than the price of the good when an additional unit
       is sold

21. Jerry's Quarry sells building stone in a perfectly competitive market. At its current
    level of building stone production, Jerry's Quarry has marginal costs equal to RM45,
    and AVC is rising. If the market price of building stone is RM50, Jerry's Quarry should
    _____.
    A. increase its production of building stone
    B. shut down and produce no building stone
    C. decrease its level of building stone production
    D. continue producing its current level of production

22. You sell your good in a perfectly competitive market where the market price is
    RM7.00. When you sell 100 units, your total revenue is RM700. When you sell 101
    units, _____.
    A. total revenue may increase or decrease
    B. total revenue increases by exactly RM7
    C. total revenue increases by less than RM7
    D. total revenue increases by more than RM7

23. A firm will not shut down in the short run as long as price exceeds _____.
    A. total revenue at the level of output where marginal revenue equals marginal cost
    B. marginal cost at the level of output where marginal revenue equals marginal cost
    C. average fixed cost at the level of output where marginal revenue equals marginal
       cost
    D. average variable cost at the level of output where marginal revenue equals
       marginal cost

24. Which of the following is an example of a barrier to entry?
    A. Lack of a website.
    B. A newspaper sells advertising space to businesses.
    C. A firm is open for business only at certain hours of the day, and has its doors
       locked at other times.
    D. The government grants licenses to taxi drivers, without which it is illegal to
       operate a taxi.

25. A monopolist will never produce at a quantity where the _____.
    A. MR<0
    B. MR>0
    C. P > MR
    D. MR=MC

Continued...

26. Which of the following is most accurate?
    A. In all cases, competitive markets yield less consumer surplus than would be enjoyed in a monopoly market with the same cost structure.
    B. In all cases, competitive markets yield more consumer surplus than would be enjoyed in a monopoly market with the same cost structure.
    C. In some cases, competitive markets can yield less consumer surplus than would be enjoyed in a monopoly market with the same cost structure.
    D. In all cases, competitive markets yield the same consumer surplus that would be enjoyed in a monopoly market with the same cost structure.

27. Long-run economic profits would most likely exist in which market structure?
    A. monopoly only
    B. monopoly and oligopoly
    C. monopoly and monopolistic competition
    D. monopoly, monopolistic competition and oligopoly

28. A characteristic found only in oligopolies is _____ .
    A. independence of firms
    B. interdependence of firms
    C. break-even level of profits
    D. products that are slightly different

29. A major difference between monopolistic competition and perfect competition is _____ .
    A. the number of sellers in the markets
    B. the barriers to entry in the two markets
    C. the degree by which the market demand curves slope downwards
    D. that products are not standardised in monopolistic competition unlike in perfect competition

30. Long-run equilibrium under monopolistic competition is similar to that under perfect competition in that _____ .
    A. firms earn normal profits
    B. price equals marginal cost
    C. price equals marginal revenue
    D. firms produce at the minimum point of their average cost curves

Continued...

SECTION B : STRUCTURED QUESTIONS [70 MARKS]
Instructions: Answer **ALL** questions in this section. Write your answers in the answer booklet provided.

Question 1
Part A
Exhibit 6 shows Amirah's utility derived from her consumption of energy drinks and protein bars. Amirah has RM50 to spend. A bottle of energy drink (E) costs RM5 and a protein bar (P) costs RM10.

Energy drinks (E)				Protein bars (P)			
Quantity	Total Utility	Marginal Utility	MU_E/P_E	Quantity	Total Utility	Marginal Utility	MU_P/P_P
1	10	10	2	1	50	50	5
2	18	A	F	2	86	K	P
3	24	B	G	3	106	L	Q
4	28	C	H	4	122	M	R
5	30	D	I	5	130	N	S
6	31	E	J	6	134	O	T

Exhibit 6

Based on *Exhibit 6*,
a) complete the blanks from A to T.

(5 marks)
b) refer to your answers in part (a), list all the combinations where $MU_E/P_E = MU_P/P_P$.

(3 marks)
c) which combination of energy drinks and protein bars would maximise Amirah's total utility? Show your working and briefly explain.

(4 marks)
d) if the price of a bottle of energy drink increases, what should Amirah do to remain in equilibrium (maximise her total utility)?

(2 marks)

Part B
John likes to spend Thursday nights playing pool and drinking soda. John's budget for Thursday nights is $10. He can spend for a cup of soda that costs $2 and one game of pool that costs $1.

a) Draw a graph of John's budget line with cups of soda on the vertical axis and games of pool on the horizontal axis. Be sure to identify the values of intercepts.

(2 marks)
b) If John consumes 2 cups of soda, how many games of pool can he play if he wants to maximise his total utility? Show your working.

(2 marks)
c) Draw an indifference curve on the same graph in part (a) to indicate the combination that you obtained from part (b) as the optimum consumption point.

(2 marks)
[TOTAL 20 MARKS]

Continued...

Question 2

Suppose that Maxwell owns an automobile repair shop. **Exhibit 7** depicts the quantity of cars Maxwell can repair per month as the number of labour he hires is varied. Assume that he pays each worker RM4,000 per month and his fixed cost is RM6,000 per month.

No. of labour	Quantity of cars
0	0
1	10
2	35
3	45
4	50
5	53

Exhibit 7

Based on **Exhibit 7**,

a) calculate the marginal product of labour for Maxwell.

(2.5 marks)

b) at which level of labour input do you see increasing marginal returns? At which level of labour input do you see diminishing marginal returns?

(2 marks)

c) calculate the total variable costs and total costs for Maxwell.

(6 marks)

d) calculate marginal cost for all levels of output.

(2.5 marks)

e) discuss the relationship between marginal cost and marginal product by referring to the marginal cost and marginal product obtained in (a) and (d).

(3 marks)

f) sketch a diagram to explain the relationship between marginal cost and average total cost.

(4 marks)

[TOTAL 20 MARKS]

Question 3

Part A

Suppose Randy runs a cabbage farm and it is a price taker. Randy is thinking of maximising his profit, so he must decide how many acres to farm. **Exhibit 8** shows Randy's total cost and total revenue for different number of acres farmed.

Quantity (acres)	Total revenue (RM)	Total cost (RM)
0	0	1,000
1	1,400	1,800
2	2,800	2,400
3	4,200	3,000
4	5,600	3,800
5	7,000	5,000
6	8,400	6,600

Exhibit 8

Continued...

a) How much would be the price per acre of land?

(1.5 marks)

b) Calculate average total cost (ATC), marginal cost (MC), and marginal revenue (MR) for each acre of land.

(7 marks)

c) Plot ATC, MC, and MR curves on a graph.

(4 marks)

d) Based on the diagram in (c), determine how many acres of land Randy should farm so that he will maximise his profit. Briefly explain. How much would be the economic profit at this profit maximising acres of land? Shade the area of economic profit in the diagram that you have drawn in (c).

(5 marks)

e) What would happen to the price per acre of land in the long run? Can Randy still enjoy economic profit in the long run? Explain.

(2.5 marks)

Part B

Exhibit 9 shows the demand for Mickey's Marbles which has a monopoly in the sale of marbles. The average total cost of production for the various levels of output is also shown in *Exhibit 9*.

Quantity	Price (RM)	Average total cost (RM)
1	18	21.0
2	16	12.0
3	14	10.0
4	12	10.0
5	10	10.8

Exhibit 9

a) Calculate total revenue, total cost and total profit for each output produced.

(7.5 marks)

b) Based on (a), what is the level of output that maximises the firm's profit? What price should the firm charge?

(1 mark)

c) Can Mickey's Marbles price discriminate? Briefly explain.

(1.5 marks)

[TOTAL 30 MARKS]

End of paper